

# SEQUENCE LISTING

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<120> CRYSTAL STRUCTURE OF ACPS/ACP COMPLEX, SOLUTION STRUCTURE  
 OF B. SUBTILIS ACP, AND USES THEREOF

<130> 2368/14

<140> US 09/770,834

<141> 2001-01-25

<150> US 60/202,466

<151> 2000-05-08

<160> 16

<170> PatentIn version 3.0

<210> 1

<211> 81

<212> PRT

<213> Bacillus subtilis

<400> 1

Gly	Pro	Leu	Gly	Ser	Ala	Asp	Thr	Leu	Glu	Arg	Val	Thr	Lys	Ile	Ile
1				5					10					15	
Val	Asp	Arg	Leu	Gly	Val	Asp	Glu	Ala	Asp	Val	Lys	Leu	Glu	Ala	Ser
			20					25					30		
Phe	Lys	Glu	Asp	Leu	Gly	Ala	Asp	Ser	Leu	Asp	Val	Val	Glu	Leu	Val
			35				40					45			
Met	Glu	Leu	Glu	Asp	Glu	Phe	Asp	Met	Glu	Ile	Ser	Asp	Glu	Asp	Ala
	50					55					60				
Glu	Lys	Ile	Ala	Thr	Val	Gly	Asp	Ala	Val	Asn	Tyr	Ile	Gln	Asn	Gln
65					70					75				80	

Gln

<210> 2

<211> 120

<212> PRT

<213> Bacillus subtilis

<400> 2

Ala Tyr Gly Ile Gly Leu Asp Ile Thr Glu Leu Lys Arg Ile Ala Ser  
1 5 10 15  
Met Ala Gly Arg Gln Lys Arg Phe Ala Glu Arg Ile Leu Thr Arg Ser  
20 25 30  
Glu Leu Asp Gln Tyr Tyr Glu Leu Ser Glu Lys Arg Lys Asn Glu Phe  
35 40 45  
Leu Ala Gly Arg Phe Ala Ala Lys Glu Ala Phe Ser Lys Ala Phe Gly  
50 55 60  
Thr Gly Ile Gly Arg Gln Leu Ser Phe Gln Asp Ile Glu Ile Arg Lys  
65 70 75 80  
Asp Gln Asn Gly Lys Pro Tyr Ile Ile Cys Thr Lys Leu Ser Gln Ala  
85 90 95  
Ala Val His Val Ser Ile Thr His Thr Lys Glu Tyr Ala Ala Ala Gln  
100 105 110  
Val Val Ile Glu Arg Leu Ser Ser  
115 120

<210> 3

<211> 122

<212> PRT

<213> Aquifex sp.

<400> 3

Met Ile Gly Val Asp Ile Val Lys Asn Glu Arg Ile Lys Asp Ala Leu  
1 5 10 15  
Glu Arg Phe Gly Asp Lys Phe Leu Asp Arg Ile Tyr Thr Lys Arg Glu  
20 25 30  
Leu Glu Tyr Cys Tyr Ala His Cys Asp Phe Leu Pro Cys Leu Ala Ala  
35 40 45  
Arg Trp Ala Gly Lys Glu Ala Val Leu Lys Ala Phe Tyr Thr Glu Phe  
50 55 60  
Lys Ile Phe Leu Arg Phe Lys Glu Ile Glu Ile Leu Gly Asn Arg Gly  
65 70 75 80  
Arg Pro Pro Thr Val Val Ile Asn Arg Glu Gly Val Glu Glu Ile Leu  
85 90 95  
Lys Asn Tyr Glu Val Ile Val Ser Leu Ser His Glu Arg Asp Tyr Ser  
100 105 110  
Val Ala Val Ala Tyr Ile Lys Lys Lys Ser  
115 120

<210> 4

<211> 122

<400> 4

Met 1	Glu	Ile	Ile 5	His	Ile	Gly	Thr	Asp	Ile 10	Ile	Glu	Ile	Ser	Arg 15	Ile
Arg	Glu	Ala	Ile 20	Ala	Thr	His	Gly	Asn 25	Arg	Leu	Leu	Asn	Arg 30	Ile	Phe
Thr	Glu	Ala 35	Glu	Gln	Lys	Tyr	Cys 40	Leu	Glu	Lys	Thr	Asp 45	Pro	Ile	Pro
Ser	Phe 50	Ala	Gly	Arg	Phe	Ala 55	Gly	Lys	Glu	Ala	Val 60	Ala	Lys	Ala	Leu
Gly 65	Thr	Gly	Ile	Gly	Ser 70	Val	Val	Ala	Trp	Lys 75	Asp	Ile	Glu	Val	Phe 80
Lys	Val	Ser	His	Gly 85	Pro	Glu	Val	Leu	Leu 90	Pro	Ser	His	Val	Tyr 95	Ala
Lys	Ile	Gly	Ile 100	Ser	Lys	Val	Ile	Leu 105	Ser	Ile	Ser	His	Cys 110	Lys	Glu
Tyr	Ala	Thr 115	Ala	Thr	Ala	Ile	Ala 120	Leu	Ala						

<210> 5

<211> 119

<212> PRT

<213> Helicobacter sp.

<400> . 5

[illegible]

<210> 6

<211> 119

<212> PRT

<213> Staphylococcus sp.

<400> 6

Met Ile His Gly Ile Gly Val Asp Leu Ile Glu Ile Asp Arg Ile Gln  
1 5 10 15  
Ala Leu Tyr Ser Lys Gln Pro Lys Leu Val Glu Arg Ile Leu Thr Lys  
20 25 30  
Asn Glu Gln His Lys Phe Asn Asn Phe Thr His Glu Gln Arg Lys Ile  
35 40 45  
Glu Phe Leu Ala Gly Arg Phe Ala Thr Lys Glu Ala Phe Ser Lys Ala  
50 55 60  
Leu Gly Thr Gly Leu Gly Lys His Val Ala Phe Asn Asp Ile Asp Cys  
65 70 75 80  
Tyr Asn Asp Glu Leu Gly Lys Pro Lys Ile Asp Tyr Glu Gly Phe Ile  
85 90 95  
Val His Val Ser Ile Ser His Thr Glu His Tyr Ala Met Ser Gln Val  
100 105 110  
Val Leu Glu Lys Ser Ala Phe  
115

<210> 7

<211> 169

<212> PRT

<213> Thermotoga sp.

<400> 7

Met Ile Val Gly Val Gly Ile Asp Val Leu Glu Val Glu Arg Val Pro  
1 5 10 15  
Glu Lys Phe Ala Glu Arg Ile Leu Gly Glu Ser Glu Lys Arg Leu Phe  
20 25 30  
Leu Thr Arg Lys Arg Arg Arg Glu Phe Ile Ala Gly Arg Phe Ala Leu  
35 40 45  
Lys Glu Ala Phe Phe Lys Ala Leu Gly Thr Gly Leu Asn Gly His Ser  
50 55 60  
Phe Thr Asp Val Glu Phe Leu Glu Ser Asn Gly Lys Pro Val Leu Cys  
65 70 75 80  
Val His Lys Asp Phe Gly Phe Phe Asn Tyr Ala His Val Ser Leu Ser  
85 90 95

His Asp Arg Phe Ala Val Ala Leu Val Val Leu Glu Lys Arg Lys Gly  
100 105 110

Asp Ile Ile Val Glu Gly Asp Glu Ser Phe Leu Arg Lys Arg Phe Glu  
115 120 125

Val Leu Glu Arg Ser Val Glu Gly Trp Glu Ile Glu Thr Ser Leu Pro  
130 135 140

Pro Phe Thr Leu Lys Lys Leu Leu Glu Ser Ser Gly Cys Arg Leu Val  
145 150 155 160

Arg Tyr Gly Asn Ile Leu Ile Gly Glu  
165

<210> 8

<211> 126

<212> PRT

<213> Escherichia coli

<400> 8

Met Ala Ile Leu Gly Leu Gly Thr Asp Ile Val Glu Ile Ala Arg Ile  
1 5 10 15

Glu Ala Val Ile Ala Arg Ser Gly Asp Arg Leu Ala Arg Arg Val Leu  
20 25 30

Ser Asp Asn Glu Trp Ala Ile Trp Lys Thr His His Gln Pro Val Arg  
35 40 45

Phe Leu Ala Lys Arg Phe Ala Val Lys Glu Ala Ala Ala Lys Ala Phe  
50 55 60

Gly Thr Gly Ile Arg Asn Gly Leu Ala Phe Asn Gln Phe Glu Val Phe  
65 70 75 80

Asn Asp Glu Leu Gly Lys Pro Arg Leu Arg Leu Trp Gly Glu Ala Leu  
85 90 95

Lys Leu Ala Glu Lys Leu Gly Val Ala Asn Met His Val Thr Leu Ala  
100 105 110

Asp Glu Arg His Tyr Ala Cys Ala Thr Val Ile Ile Glu Ser  
115 120 125

<210> 9

<211> 126

<212> PRT

<213> Rickettsia sp.

<400> 9

Met Leu Ile Gly Val Gly Thr Asp Ile Val Gln Ile Pro Arg Ile Glu  
1 5 10 15

Lys Ile Leu Asn Ile Tyr Gln Glu Leu Phe Ala Lys Lys Ile Leu Ala  
 20 25 30  
 Leu Lys Glu Leu Lys Gln Phe Thr Leu Leu Asn Lys Thr Asn His Ala  
 35 40 45  
 Thr Phe Leu Ala Lys Arg Phe Ser Ala Lys Glu Ala Val Ser Lys Ala  
 50 55 60  
 Phe Gly Val Gly Ile Gly Arg Gly Ile Asn Phe Lys Asp Ile Thr Ile  
 65 70 75 80  
 Leu Asn Asp Asn Leu Gly Lys Pro Thr Val Glu Ile Ser Ser His Tyr  
 85 90 95  
 Thr Asn Lys Leu Ala Pro Phe Asn Ile His Leu Ser Leu Ser Asp Asp  
 100 105 110  
 Tyr Pro Ile Cys Ile Ala Phe Ala Ile Ile Glu Ser Asn Cys  
 115 120 125

<210> 10

<211> 123

<212> PRT

<213> Streptomyces sp.

<400> 10

Met Ser Ile Ile Gly Val Gly Ile Asp Val Ala Glu Val Glu Arg Phe  
 1 5 10 15  
 Gly Ala Ala Leu Glu Arg Thr Pro Ala Leu Ala Gly Arg Leu Phe Leu  
 20 25 30  
 Glu Ser Glu Leu Leu Leu Pro Gly Gly Glu Arg Arg Gly Val Ala Ser  
 35 40 45  
 Leu Ala Ala Arg Phe Ala Ala Lys Glu Ala Leu Ala Lys Ala Leu Gly  
 50 55 60  
 Ala Pro Ala Gly Leu Leu Trp Thr Asp Ala Glu Val Trp Val Glu Ala  
 65 70 75 80  
 Gly Gly Arg Pro Arg Leu Arg Val Thr Gly Thr Val Ala Ala Arg Ala  
 85 90 95  
 Ala Glu Leu Gly Val Ala Ser Trp His Val Ser Leu Ser His Asp Ala  
 100 105 110  
 Gly Ile Ala Ser Ala Val Val Ile Ala Glu Gly  
 115 120

<210> 11

<211> 125

<212> PRT

<213> Treponema sp.

<400> 11

Met	Ile	Ile	Gly	Val	Gly	Ile	Asp	Ile	Val	Glu	Ile	Glu	Arg	Phe	Val
1				5					10					15	
Ser	Trp	Thr	His	Asn	Val	Arg	Leu	Leu	Arg	Arg	Phe	Phe	His	Gln	Glu
			20					25					30		
Glu	Ile	Val	Asp	Phe	Phe	Lys	Asn	His	Met	Arg	Ala	Gln	Phe	Leu	Ala
		35					40					45			
Thr	Arg	Phe	Ala	Ala	Lys	Glu	Ala	Phe	Gly	Lys	Ala	Leu	Gly	Thr	Gly
	50					55					60				
Leu	Arg	Asn	Met	Glu	Leu	Arg	Asn	Ile	Arg	Val	Cys	Gln	Asn	Gly	Trp
65				70					75						80
Gly	Lys	Pro	Arg	Leu	Glu	Val	Tyr	Gly	Ala	Ala	Gln	Ala	Met	Leu	Ala
				85					90					95	
Ala	Thr	Gly	Gly	Thr	His	Ile	Gln	Val	Ser	Leu	Thr	His	Glu	Arg	Glu
			100					105					110		
Val	Ala	Ser	Ala	Ile	Val	Ile	Ile	Glu	Gly	Glu	Pro	Leu			
		115					120					125			

<210> 12

<211> 121

<212> PRT

<213> Bacillus sp.

<400> 12

Met	Ile	Tyr	Gly	Ile	Gly	Leu	Asp	Ile	Thr	Glu	Leu	Lys	Arg	Ile	Ala
1				5					10					15	
Ser	Met	Ala	Gly	Arg	Gln	Lys	Arg	Phe	Ala	Glu	Arg	Ile	Leu	Thr	Arg
			20					25					30		
Ser	Glu	Leu	Asp	Gln	Tyr	Tyr	Glu	Leu	Ser	Glu	Lys	Arg	Lys	Asn	Glu
		35					40					45			
Phe	Leu	Ala	Gly	Arg	Phe	Ala	Ala	Lys	Glu	Ala	Phe	Ser	Lys	Ala	Phe
	50					55					60				
Gly	Thr	Gly	Ile	Gly	Arg	Gln	Leu	Ser	Phe	Gln	Asp	Ile	Glu	Ile	Arg
65					70				75						80
Lys	Asp	Gln	Asn	Gly	Lys	Pro	Tyr	Ile	Ile	Cys	Thr	Lys	Leu	Ser	Gln
				85					90					95	
Ala	Ala	Val	His	Val	Ser	Ile	Thr	His	Thr	Lys	Glu	Tyr	Ala	Ala	Ala
			100					105					110		
Gln	Val	Val	Ile	Glu	Arg	Leu	Ser	Ser							
		115					120								

<210> 13

<211> 139

<212> PRT

<213> Bradyrhizobium sp.

<400> 13

Met Ile Ile Gly Ile Gly Ser Asp Leu Ile Asp Ile Thr Arg Val Gly  
1 5 10 15  
Lys Val Ile Glu Arg His Gly Glu Arg Phe Leu Asp Arg Ile Phe Thr  
20 25 30  
Ala Ala Glu Arg Ala Lys Ala Glu Arg Arg Ala Lys Asn Glu Lys Met  
35 40 45  
Val Val Ala Thr Tyr Ala Lys Arg Phe Ala Ala Lys Glu Ala Cys Ser  
50 55 60  
Lys Ala Leu Gly Thr Gly Ile Arg Arg Gly Val Trp Trp Arg Asp Met  
65 70 75 80  
Gly Val Val Asn Leu Pro Gly Gly Arg Pro Thr Met Gln Leu Thr Gly  
85 90 95  
Gly Ala Leu Ala Arg Leu Gln Ala Leu Thr Pro Asp Gly Phe Glu Ala  
100 105 110  
Arg Ile Asp Val Ser Ile Thr Asp Asp Trp Pro Leu Ala Gln Ala Phe  
115 120 125  
Val Ile Ile Ser Ala Val Pro Leu Ala Lys Ser  
130 135

<210> 14

<211> 130

<212> PRT

<213> Mycobacterium sp.

<400> 14

Met Gly Ile Val Gly Val Gly Ile Asp Leu Val Ser Ile Pro Asp Phe  
1 5 10 15  
Ala Glu Gln Val Ser Gln Pro Gly Thr Val Phe Met Thr Ile Phe Thr  
20 25 30  
Pro Gly Glu Arg Arg Asp Ala Ser Val Lys Ser Ser Ser Ala Val Cys  
35 40 45  
His Leu Ala Ala Arg Trp Ala Val Lys Glu Ala Val Ile Lys Ala Trp  
50 55 60  
Ser Gly Ser Arg Phe Ala Gln Arg Pro Met Leu Pro Glu Asn Ile His  
65 70 75 80  
Arg Asp Ile Glu Val Val Asn Asp Met Trp Gly Arg Pro Arg Val Arg  
85 90 95  
Leu Thr Gly Ala Ile Ala Lys His Leu Thr Asp Val Thr Ile His Val  
100 105 110



Ser Leu Thr His Glu Gly Asp Ile Ala Ala Ala Val Val Ile Leu Glu  
115 120 125

Val Leu  
130

<210> 15

<211> 77

<212> PRT

<213> Escherichia coli

<400> 15

Ser Thr Ile Glu Glu Arg Val Lys Lys Ile Ile Gly Glu Gln Leu Gly  
1 5 10 15

Val Lys Gln Glu Glu Val Thr Asn Asn Ala Ser Phe Val Glu Asp Leu  
20 25 30

Gly Ala Asp Ser Leu Asp Thr Val Glu Leu Val Met Ala Leu Glu Glu  
35 40 45

Glu Phe Asp Thr Glu Ile Pro Asp Glu Glu Ala Glu Lys Ile Thr Thr  
50 55 60

Val Gln Ala Ala Ile Asp Tyr Ile Asn Gly His Gln Ala  
65 70 75

<210> 16

<211> 86

<212> PRT

<213> Streptomyces coelicolor

<400> 16

Met Ala Thr Leu Leu Thr Thr Asp Asp Leu Arg Arg Ala Leu Val Glu  
1 5 10 15

Cys Ala Gly Glu Thr Asp Gly Thr Asp Leu Ser Gly Asp Phe Leu Asp  
20 25 30

Leu Arg Phe Glu Asp Ile Gly Tyr Asp Ser Leu Ala Leu Met Glu Thr  
35 40 45

Ala Ala Arg Leu Glu Ser Arg Tyr Gly Val Ser Ile Pro Asp Asp Val  
50 55 60

Ala Gly Arg Val Asp Thr Pro Arg Glu Leu Leu Asp Leu Ile Asn Gly  
65 70 75 80

Ala Leu Ala Glu Ala Ala  
85